

Attorney Docket No. JANG-001

APPLICATION

FOR UNITED STATES LETTERS PATENT

SPECIFICATION

18 TO ALL WHOM IT MAY CONCERN:

19

20 BE IT KNOWN THAT I, **Frank M. Jangula**, a citizen of the United States, have
21 invented a new and useful post puller system of which the following is a specification:

1

2 **Post Puller System**

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4

5 **CROSS REFERENCE TO RELATED APPLICATIONS**

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7 Not applicable to this application.

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11 **STATEMENT REGARDING FEDERALLY**

12 **SPONSORED RESEARCH OR DEVELOPMENT**

13

14 Not applicable to this application.

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16

17 **BACKGROUND OF THE INVENTION**

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21 **Field of the Invention**

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23 The present invention relates generally to post pullers and more specifically it

24 relates to a post puller system for efficiently removing posts from a ground surface.

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26

27 **Description of the Related Art**

28

29 Post pullers have been in use for years. Conventional post pullers are typically

30 comprised of a hand-operated structure wherein the user must manually attach and

31 remove the post from the ground surface. Another method utilized by farmers to

- 1 remove posts is by utilizing a chain or rope attached between a loader and the post.
- 2 Both of these post removing systems have their inherent problems.

3

4 While these devices may be suitable for the particular purpose to which they
5 address, they are not as suitable for efficiently removing posts from a ground surface.
6 Conventional post pullers are manually operated and are time consuming to operate.

7

8 In these respects, the post puller system according to the present invention
9 substantially departs from the conventional concepts and designs of the prior art, and
10 in so doing provides an apparatus primarily developed for the purpose of efficiently
11 removing posts from a ground surface.

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2 **BRIEF SUMMARY OF THE INVENTION**

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4 In view of the foregoing disadvantages inherent in the known types of post
5 pullers now present in the prior art, the present invention provides a new post puller
6 system construction wherein the same can be utilized for efficiently removing posts
7 from a ground surface.

8

9 The general purpose of the present invention, which will be described
10 subsequently in greater detail, is to provide a new post puller system that has many of
11 the advantages of the post pullers mentioned heretofore and many novel features that
12 result in a new post puller system which is not anticipated, rendered obvious,
13 suggested, or even implied by any of the prior art post pullers, either alone or in any
14 combination thereof.

15

16 To attain this, the present invention generally comprises a frame attachable to a
17 loader of a tractor, an extended structure extending from the frame, a first jaw
18 pivotally attached to the extended structure, an actuator unit attached between the
19 frame and the first jaw, and a second jaw and a third jaw attached to the extended
20 portion. A post is positioned between the jaws and the actuator unit closes the first
21 jaw with respect to the second jaw and the third jaw until catchably engaged. The user
22 then lifts the post from the ground surface.

23

24 There has thus been outlined, rather broadly, the more important features of the
25 invention in order that the detailed description thereof may be better understood, and
26 in order that the present contribution to the art may be better appreciated. There are
27 additional features of the invention that will be described hereinafter and that will form
28 the subject matter of the claims appended hereto.

29

1 In this respect, before explaining at least one embodiment of the invention in
2 detail, it is to be understood that the invention is not limited in its application to the
3 details of construction and to the arrangements of the components set forth in the
4 following description or illustrated in the drawings. The invention is capable of other
5 embodiments and of being practiced and carried out in various ways. Also, it is to be
6 understood that the phraseology and terminology employed herein are for the purpose
7 of the description and should not be regarded as limiting.

8

9 A primary object of the present invention is to provide a post puller system that
10 will overcome the shortcomings of the prior art devices.

11

12 A second object is to provide a post puller system for efficiently removing posts
13 from a ground surface.

14

15 Another object is to provide a post puller system that may be utilized upon
16 various types of posts such as but not limited to wood posts and metal posts.

17

18 An additional object is to provide a post puller system that is attachable to
19 various vehicles such as but not limited to tractors.

20

21 A further object is to provide a post puller system that does not require
22 significant physical labor to remove a post from a ground surface.

23

24 Another object is to provide a post puller system that efficiently removes posts
25 from a ground surface.

26

27 Other objects and advantages of the present invention will become obvious to the
28 reader and it is intended that these objects and advantages are within the scope of the
29 present invention.

1

2 To the accomplishment of the above and related objects, this invention may be
3 embodied in the form illustrated in the accompanying drawings, attention being called
4 to the fact, however, that the drawings are illustrative only, and that changes may be
5 made in the specific construction illustrated and described within the scope of the
6 appended claims.

1

2 **BRIEF DESCRIPTION OF THE DRAWINGS**

3

4 Various other objects, features and attendant advantages of the present
5 invention will become fully appreciated as the same becomes better understood when
6 considered in conjunction with the accompanying drawings, in which like reference
7 characters designate the same or similar parts throughout the several views, and
8 wherein:

9

10 FIG. 1 is an upper perspective view of the present invention with the jaws open.

11

12 FIG. 2 is an upper perspective view of the present invention with the jaws
13 closed.

14

15 FIG. 3a is a top view with the jaws open and positioned about a metal post.

16

17 FIG. 3b is a top view with the jaws partially closed and positioned about the
18 metal post.

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20 FIG. 3c is a top view with the jaws closed about the metal post.

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22 FIG. 4a is a top view with the jaws open and positioned about a wooden post.

23

24 FIG. 4b is a top view with the jaws closed about a wooden post.

25

26 FIG. 5 is a side view of the present invention being positioned about a wooden
27 post.

28

1 FIG. 6 is a side view of the present invention secured about a wooden post and
2 lifting the wooden post from the ground surface.

3

4 FIG. 7 is a side view of the present invention secured about a wooden post
5 having lifted the wooden post completely from the ground surface.

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2 **DETAILED DESCRIPTION OF THE INVENTION**

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4 *A. Overview*

5 Turning now descriptively to the drawings, in which similar reference
6 characters denote similar elements throughout the several views, FIGS. 1 through 7
7 illustrate a post puller system **10**, which comprises a frame **20** attachable to a loader of
8 a tractor **12**, an extended structure **30** extending from the frame **20**, a first jaw **50**
9 pivotally attached to the extended structure **30**, an actuator unit **40** attached between
10 the frame **20** and the first jaw **50**, and a second jaw **60** and a third jaw **70** attached to
11 the extended portion. A post is positioned between the jaws and the actuator unit **40**
12 closes the first jaw **50** with respect to the second jaw **60** and the third jaw **70** until
13 catchably engaged. The user then lifts the post from the ground surface.

14

15 *B. Frame*

16 Figures 1 and 2 best illustrate the frame **20**. The frame **20** is attachable to a
17 loader of a tractor **12** as shown in Figures 5 through 7 of the drawings. The frame **20**
18 may be attached to the loader utilizing various conventional attachment structures
19 which are well known in the art of loaders. The frame **20** may have various structures
20 other than illustrated in the drawings as can be appreciated.

21

22 The frame **20** may include a first support **22** and a second support **24** extending
23 outwardly from an upper portion of the frame **20** for supporting an upper portion of a
24 post during and after removal as illustrated in Figures 1, 2, 5, 6 and 7 of the drawings.
25 The first support **22** and the second support **24** may form a V-shaped or U-shaped
26 receiving structure as shown in Figures 1 and 2 of the drawings. When the post **14, 16**
27 is removed from the ground surface, the upper portion of the post **14, 16** may rest
28 against the frame **20**.

1 **C. Extended Structure**

2 Figures 1 through 4b of the drawings illustrate an extended structure **30**
3 extending from the frame **20**. The extended structure **30** extends outwardly a finite
4 distance to support the jaws **50, 60, 70** as shown in Figures 1 through 4b of the
5 drawings. It can be appreciated that the jaws **50, 60, 70** may be directly connected to
6 the frame **20** without the extended structure **30**.

7

8 **D. Jaws**

9 Figures 1 through 5 of the drawings illustrate a first jaw **50** pivotally attached to
10 the extended structure **30** or to the frame **20**. The inner end of the first jaw **50** is
11 pivotally attached to the extended structure **30** or the frame **20** for allowing pivotal
12 movement along a substantially horizontal plane. It can be appreciated that the first
13 jaw **50** may be non-movably attached to the extended structure **30** or the frame **20**
14 instead of the second jaw **60** and the third jaw **70**.

15

16 The second jaw **60** and the third jaw **70** are attached to the extended portion or
17 the frame **20** in opposition to the first jaw **50** for catchably receiving a post between
18 thereof as illustrated in Figures 1 and 2 of the drawings. The second jaw **60** and the
19 third jaw **70** define a slot between thereof that is capable of receiving the first jaw **50**
20 as further shown in Figures 1 and 2 of the drawings.

21

22 The second jaw **60** and the third jaw **70** may be non-movably or pivotally
23 attached to the extended portion or the frame **20**. If the second jaw **60** and the third
24 jaw **70** are non-movably attached, a support member **62** may be attached between the
25 extended portion (or the frame **20**) and the first jaw **50** and the second jaw **60** as
26 illustrated in Figures 3a through 4b of the drawings.

27

28 As best illustrated in Figures 3a through 4b of the drawings, the first jaw **50**,
29 the second jaw **60** and the third jaw **70** each have an inwardly curved structure. The

1 first jaw **50**, the second jaw **60** and the third jaw **70** also each have a central straight
2 portion as best illustrated in Figure 3b of the drawings.

3

4 **E. Actuator Unit**

5 The actuator unit **40** is attached between the frame **20** and the first jaw **50** as
6 shown in Figures 1 through 7 of the drawings. The actuator unit **40** is attached to the
7 first arm a distance away from a pivot point as best illustrated in Figures 4a and 4b of
8 the drawings. The actuator unit **40** may be comprised of a hydraulic cylinder or other
9 actuator structure. A control unit or other control system is in communication with the
10 actuator unit **40** for controlling the operation of the actuator unit **40**.

11

12 **F. Operation of Invention**

13 In use, the user first attached the present invention to the loader of a tractor **12**
14 as illustrated in Figures 5 through 7 of the drawings. The user then opens the first jaw
15 **50** with respect to the second jaw **60** and the third jaw **70** as shown in Figures 3a and
16 4a of the drawings.

17

18 Whether removing a metal post **14** or a wooden post **16**, the user positions the
19 post **14, 16** between the jaws **50, 60, 70** as shown in Figures 3a and 4a of the drawings.
20 The user then manipulates the actuator unit **40** so as to extend thereby closing the first
21 jaw **50** with respect to the second jaw **60** and the third jaw **70** as shown in Figures 3b
22 and 4b of the drawings. The first jaw **50** is closed until the post **14, 16** is catchably
23 engaged between the jaws **50, 60, 70** as shown in Figures 3c and 4b of the drawings.

24

25 The user then lifts the present invention with the post **14, 16** catchably received
26 within the jaws **50, 60, 70** by elevating the loader of the tractor **12** as shown in Figure
27 6 of the drawings. The user continues elevating the post **14, 16** until the post **14, 16** is
28 completely removed from the ground as shown in Figure 7 of the drawings. The user
29 may then transport the post **14, 16** to a desired location and release the jaws **50, 60, 70**

1 from the post **14, 16** thereby releasing the post **14, 16** from the jaws **50, 60, 70**. The
2 user may then repeat the above process for additional posts **14, 16**.

3

4 As to a further discussion of the manner of usage and operation of the present
5 invention, the same should be apparent from the above description. Accordingly, no
6 further discussion relating to the manner of usage and operation will be provided.

7

8 With respect to the above description then, it is to be realized that the optimum
9 dimensional relationships for the parts of the invention, to include variations in size,
10 materials, shape, form, function and manner of operation, assembly and use, are
11 deemed to be within the expertise of those skilled in the art, and all equivalent
12 structural variations and relationships to those illustrated in the drawings and
13 described in the specification are intended to be encompassed by the present invention.

14

15 Therefore, the foregoing is considered as illustrative only of the principles of
16 the invention. Further, since numerous modifications and changes will readily occur to
17 those skilled in the art, it is not desired to limit the invention to the exact construction
18 and operation shown and described, and accordingly, all suitable modifications and
19 equivalents may be resorted to, falling within the scope of the invention.